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ABSTRACT

The Water in Africa Project was realized over a 2-year period by a team of Peace Corps volunteers, World Wise Schools (WWS) classroom teachers, and WWS staff members. As part of an expanded, detailed design, resources were collected from over 90 volunteers serving in African countries, photos and stories were prepared, and standards-based learning units were created for K-12 students. Intended for use with middle school students, this unit can be used in geography and technology integration classes. One class period a day for two or three weeks is suggested. Students, grouped in small research teams, will simulate a trip to Madagascar through the Peace Corps' Water in Africa resources about Madagascar and other related Web sites. Using online research, students will explore the effect of slash/burn agriculture on Madagascar's people, environment, and lemurs. Students will create technology enhanced presentations of their findings and present viable alternatives for both using and protecting Madagascar's natural resources. The unit lists materials needed, outlines applicable standards, poses discussion questions, and lists student objectives. It details day-by-day procedures and suggests assessment activities and follow-up/enrichment activities. (BT)

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Water in Africa

Madagascar Adventure

http://www.peacecorps.gov/wws/water/africa/lessons/

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Water in Africa is a project of Peace Corps World Wise Schools.

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Funded through a grant from the Department of Education, the Water in Africa project was realized over a two year period by a team of Peace Corps Volunteers, World Wise Schools' (WWS) classroom teachers, and WWS staff members. Inspired by an idea of one creative WWS teacher, the project eventually expanded into a detailed design. The development and implementation of the design included the collection of resources from over 90 Volunteers serving in African countries, the preparation of those photos and stories, and the creation of standards-based learning units for K-12 students.

Madagascar Adventure

Description:

Grouped in small research teams, students will simulate a trip to Madagascar through the Peace Corps' Water in Africa resources about Madagascar and other related web sites. Using online research, students will explore the effect of slash/burn agriculture on Madagascar's people, environment, and lemurs. Students will create technology enhanced presentations of their findings and present viable alternatives for both using and protecting Madagascar's natural resources.

Timeframe: One class period a day for two to three weeks.

Curricular Areas: Geography
Technology Integration

Grade Level: 6-8 grade

Materials

- Pictures and Reference Books on Madagascar and Lemurs
- Student e-mail accounts
- Electronic presentation software such as HyperStudio or PowerPoint
- Madagascar Environment/Agriculture Stories
- Teacher Copy of Madagascar/Agriculture Stories (highlighted)
- MG Links
- Photo-Essay Guidelines
- Evaluation Rubric

Standards

Geography Standard 4- Understands the physical and human characteristics of place

Benchmark-- Knows the causes and effects of changes in a place over time

Geography Standard 14- Understands how human actions modify the physical environment

Benchmark-- Understands the environmental consequences of people changing the physical environment

Benchmark-- Understands the ways in which human-induced changes in the physical environment in one place can cause changes in other places

Geography Standard 16- Understands the changes that occur in the meaning, use, distribution, and importance of resources

Benchmark-- Understands the reasons for conflicting viewpoints regarding how

resources should be used

Geography Standard 18- Understands global development and environmental issues

Benchmark-- Knows the ways in which resources can be managed and why it is important to do so

Benchmark-- Knows human-induced changes that are taking place in different regions and the possible future impacts of these changes

Technology Standard 3- Technology productivity tools --

- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Benchmark- Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum

Technology Standard 4- Technology communication tools

- Students use telecommunications to collaborate, publish and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Benchmark- Design, develop, publish, and present products using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom

Technology Standard 5- Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

Benchmark- Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solutions or products for audiences inside and outside the classroom.

Essential Questions

How do people affect and change the environment?

How can we balance our need to use natural resources while also preserving these resources?

Why is it important to know how we impact our resources?

Objectives

- Students will conduct research to discover why Madagascar's rainforests have declined, how the loss of Madagascar's rains forests has affected the island's water and soil resources, and how the people of Madagascar might preserve their natural resources while using them for food and a livelihood.
- Students will synthesize and draw conclusions about people affecting the environment and balancing resources and needs.
- Students will create a technology enhanced project to present their information.

Procedure

Procedure Day One

1. Please note: This activity is planned for a two-hour block or two class periods.

2. Post and pose the first essential question: How do people affect and change the environment? Engage students in dialogue and record examples generated through class discussion.

3. Show students pictures or props of lemurs (see the additional resources sections for suggestions). Explain to students that these unique animals, found only on Madagascar and the Cormor Islands, are seriously endangered. Explain that lemurs live in the quickly disappearing rainforests of Madagascar meaning that their habitat is also endangered.

3. Post and pose the following guiding question: How have traditional agriculture methods affected Madagascar's people and natural resources (vegetation, water, and soil)? Discuss this question with the students to discover what they already know about Madagascar.

4. To further explore this situation, assign students to research teams to "visit" Madagascar through the Peace Corps' Water in Africa site reading from the Madagascar Environment/ Agriculture Stories. Tell them that as a team, they will work together to better understand why deforestation is occurring and what effects it has on people and the environment. (These stories will not have information on lemurs. However, they will provide students with a clear picture of ways in which man is impacting the environment where lemurs live.)

5. Have students work with another member of the team or have all four students pull their chairs close to one computer. Have students take turns reading the vignettes aloud to their research group or partner. Suggest that they alternate seats to do this, so that each student will have a turn being in charge of the controls and reading. Occasionally ask students to pause and share their findings with the class and then instruct them to read on. If some

groups finish early have them explore the other Madagascar stories and pictures on the Peace Corps site, especially those which address the use of water for irrigation and rice paddies.

6. Toward the end of class, have teams meet, discuss, and record what they have learned in relation to the question: How have traditional agriculture methods affected Madagascar's people and natural resources (vegetation, water, and soil)? Have teams share their findings with the class.

7. Assessment Check-Point: Instruct students to answer the following questions independently on a piece of notebook paper. Collect and review to assess understanding thus far. How have people affected and changed the environment in Madagascar? Why have the changed it? What are the observable effects of the changes?

Procedure Day Two

1. Please note: This activity is planned for a two-hour block or two class periods.

2. Post and pose the second essential question: How can we balance our need to use natural resources while also preserving these resources? Refer students back to the examples they shared while discussing how people affect and change the environment. Ask them to think about those examples as they engage in a discussion about the balance between using and preserving natural resources. Record their responses.

3. To further focus the discussion, ask students to consider how the resources of Madagascar could be both used and preserved while providing the Malagasy with food and a livelihood and the lemurs with habitat.

4. Assign students to meet in their research teams. Provide each student or pairs of students with copies of the Madagascar Environment/Agriculture Stories. Make sure the students have highlighters. Tell them that they will be studying the stories for specific details about some of the PCV concerns about Madagascar's soil and water resources related to deforestation and how resources in Madagascar can be both used and preserved. (See the highlighted Teacher Copy of Madagascar/Agriculture Stories for reference.) Now, as a class, read the stories aloud and agree upon areas to highlight.

5. Conduct a discussion based on the questions you posed and student observations. Help students to proactively explore reasonable solutions to the deforestation dilemma, keeping in mind that they must begin by helping the Malagasy people make a living and have enough to eat.

6. As a class, make a list of the reasonable, realistic solutions that have emerged from the class discussion. Steer students into keeping their solutions based on what they have learned from the Volunteer stories as opposed to broad unrealistic solutions such as shipping food to everyone so they don't have to cut down the forests.

Procedure Day Three

1. Explain to students that now that their research teams are equipped with background knowledge of the situation in Madagascar, these same teams will be "virtually visiting" Madagascar through additional books and web sites. As evidence of their journey, they will be creating a photo-essay so that their team may share their research findings with others.

2. Describe the photo-essay project to the students. Tell them that their goal is to combine pictures with first person captions and explanations in the form of a photo-essay using, electronic presentation software. As they find images and information that are appropriate for the essential questions, they should save the images. The images shown to others in the group by sending them as an attachment to an e-mail with suggestions for captions. E-mails should be sent to one or two people in the group selected to format the photos using electronic presentation software. All students will share in the creative process.

3. At this point, give each student a copy of the Photo-Essay Guidelines and Evaluation Rubric. Carefully go over the handout with students beginning with the content background and the description of the photo essay project. Make sure they understand the questions they are to answer, and how they are to use both the essential questions and the guiding questions more specific to Madagascar. Go over the language and technology requirements. Allow time for students to ask questions and assign roles in their groups. Ideally, one or two students will be in charge of formatting the information in the electronic presentation software while two or three students are simultaneously researching and e-mailing information and images to the student in charge of formatting.

4. Ask students to look at the rubric that will be used to assess the finished photo essay projects. Make sure they understand the descriptors, the rating scale, and how the rubric will be used.

5. After groups have had time to work out their roles, allow groups to share how they plan to proceed with the class.

Procedure Day Four (Until Complete)

1. As an advance organizer, e-mail students a copy of MG Links or save it to a public drive for easy student access.

2. Give students a copy of the Madagascar Adventure Research Notes graphic organizer. Make sure students understand that they can use the graphic organizer to suit their needs, but must keep track of the sites they have visited by name and URL.

3. Have students refer back to the Madagascar Environment/Agriculture Stories to find examples of narration that they can quote from in their first person captions and explanations. Suggest that they look for descriptions of deforestation and its effects,

descriptions of flooding, etc.

4. Have students search the Water in Africa Madagascar images for pictures that they could include in their presentation. For example, people planting rice, rice fields being prepared, irrigation ditches, people using natural water sources, etc.

5. Refer students to the MG Links and tell them that MG is the Internet abbreviation for Madagascar. Either e-mail the document as an attachment to students of save it to a public drive for students access. I recommend that students copy and paste the URL directly into Internet. The MG Links are organized according to subtopic to correlate with the questions students are exploring.

6. Once students have explored this resource thoroughly, you may wish to have them conduct their own searches for images and captions. Students can find great examples of rice terraces, burning forests, sediment-laden rivers, and more on the Internet.

7. Finally, have students review their presentation progress and refine, proofread, and make necessary technical adjustments.

Note: At the end of each research session, review with research teams what they have learned. For example, ask students to share what they learned about water and rice in Madagascar. Ask them how rice production and increased irrigation might help make the Malagasy people less dependent of slash/burn practices. Ask students to explain how they better understand the effects of deforestation on Madagascar's environment and why it is that Malagasy people must currently depend upon slash/burn agriculture.

It is sometimes helpful in open-ended activities such as this to have each student evaluate their use of class/lab time on a scale as follows:

3: Very Productive;
2: Somewhat Productive;
1: Fairly Unproductive.

Discuss roadblocks, obstacles, successes, and discoveries. Have students share what is working in their group and what they need to work on as a group. This kind of on-going assessment and open discussion is also one way to assess progress on the Photo-Essay. Remember also to review the rubric with students to remind them of the importance of cooperation, etc.

Assessment

Once students have completed their presentations, they should be given time to practice presentation delivery. When students are prepared, hold a Madagascar Forum where research teams share their presentations. Share with an outside audience such as other grade levels, parents, local environment groups or clubs, high schools, and colleges. Have each research team individually assess their participation and performance in final products using the photo essay rubric. Students should place their rating (5-1) in each box. Collect rubrics and add your assessment feedback in each category by placing a score of 1-5 adjacent to the students based on

your observations.

Follow-up/Enrichment Activities

Keep up-to-date with Dr. Pat Wright's efforts to help Madagascar's lemurs and environment by sending an e-mail from the class to Dr. Wright.

Have a fundraiser to adopt a lemur as a class project.

Have students conduct research on environmental issues in their own areas and compare similarities and differences between these issues and those in Madagascar.

Have your librarian help your class find out more about Madagascar and lemurs through books and videos.

About the Author

Michelle Abernathy-Tabor is a sixth grade teacher in Western Washington. She enjoys teaching at the middle school level because students at this age are full of energy for life and are interested in the world around them. Michelle spoke of her work with this unit in the following reflection: My class has been instrumental in helping to make this unit its best. It was around the third of fourth day that we discovered that our goals weren't quite connecting. One student approached me and said that it was getting too complex to try and tie everything in. I had been doing a lot of thinking about our progress thus far and had come to the same conclusion. I was excited to brainstorm with students about how to resolve this. We discussed the problem and then I listed the cycle I envisioned on the board. It became clear that water was an important connection, but by spreading students too thin, we had missed the real way in which water connects to the unit. We got side tracked on daily usage and we got a little sidetracked on lemurs. I refocused, ran off copies of the environmental/agriculture stories only and then as a class we read the stories and highlighted only the parts which contained references to natural water sources: sediment filled rivers, erosion, streams drying up, silted rice fields from flooding rivers, etc. It quickly became clear that we couldn't discuss deforestation without discussing its effects on water. And we couldn't discuss saving the lemur habitat without coming up with solutions to help people create sustainable crops. It has really been fun for me to collaborate with my class on this unit. A learning experience for us all, for sure!

The Environment and Agriculture

by Clare Sandy, Andranomena, Madagascar

The water quality has improved greatly since the pump was built in 1995. Before that, the villagers of Andranomena gathered their water from a nearby stream, which was not as clean. However, large trucks back up to the pump right where people wash dishes and clothes and use gas powered pumps that often leak to fill their tanks. They are certainly a new and different source of water pollution!

Children sometimes swim and play in the streams near the villages, and in Morondava, on the coast several kilometers to the west, in the ocean. Older local people generally do not, and I've heard stories of mermaids drowning young men in the sea. Tourists, however, both foreign and Malagasy, enjoy the beach, swimming, and boating in Morondava.

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by Rob Roberts, St. Augustin, Madagascar

My town sits at the mouth of a river, flowing into the Mozambique Channel. The layout of the town is now drastically different as compared to several years before.

It isn't just poor water usage and neglect on the town's part that have forced these changes, but larger, more holistic forces. Decades of slash and burn agriculture in the country's interior have damaged the lands natural ability to soak up water. The rain now washes right down the hillsides into the river valleys, taking vegetation and sediment with it. Those river valleys quickly fill up and start rushing towards their only outlet, the sea. Every year the rivers rise more rapidly and carry away more soil, seriously altering the landscape, not only inland but on the coast as well.

A few years back there was a small village, or section of town, to the west of my house, but it is no longer there. The whole village was force to--people, the houses, and everything else--because the river had started to take over their land. Now, during the dry season, a barren patch of land exists and awaits the next onslaught with the arrival of the rains.

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by George Ritchotte, Andranomala Nord, Madagascar

Deforestation is a major problem in my region and has led to major disruption of the watershed. Many streams have dried up, and the remaining streams run red with soil from severely eroded hills. Siltation of rice fields is a problem in many areas, and Lake Alaotra shrinks more every year from the situation.

Fortunately for my village and others like it very near the park, the water here is fairly clear. But cutting, grazing, and bush fires that burn from September to November threaten the forest. The fires, set to encourage new grass growth for the cattle, gradually eat away the forest edge and

prevent regeneration.

The only new technology to hit my area in recent years in the creation of the village pumps, which have greatly improved drinking water quality.

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by Robin Larson Paulin, Andranofasika, Madagascar

Most of Madagascar's forests have been destroyed. Many have been destroyed by fires started by cattle herders to promote new growth--a healthy diet for cows. Once the land is cleared and the trees are all burned, the supporting root systems die and the nutrient rich surface soils are washed away with the rain. Huge erosion scars called lavakas are formed as hillsides wash away. They can be found all throughout Madagascar. The red soils of Madagascar suffocate the rivers and cause the rice paddies to become silted and rendered useless. Astronauts call Madagascar "The Bleeding Country" because from space it's possible to see red rivers carrying the soil out to sea. Madagascar looks as though it's bleeding to death.

The Lake Ravelobe (four kilometers from Andranofasika) is being over fished. People are fishing illegally at night with nets causing the fish population to drastically decrease. This steals the food supply from the crocodiles, leaving them hungry and searching for food. Last week a 10 year old boy bathing in the lake was attacked and eaten by a crocodile. His friends were there to see it happen. It's a very sad situation, but the Malagasy people living around the lake need to recognize the reason why it happened in order to prevent it from happening again. Fishing with nets is fady (taboo) here, but people do it at night so they can make money.

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by Jina Sagar, Ambalahenko, Madagascar

Dry land is not the only place for planting. The villagers have begun a seaweed farm, just offshore in the shallow blue water. The seaweed grows on line just below the water's surface and is anchored to the bottom by rocks. Once a week, a group takes to the sea in canoes to clean and harvest growing seaweed. It's a day of singing and salt covered skin. The seaweed is sold in town and provides steady income when rice supplies are low. Besides the source of income, the seaweed has other benefits for the area. Squid lay their eggs on the lines, growing fish take refuge in the tangled seaweed and the sea turtles can be seen in the protected waters.

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by Mark Danenhauer, Namoly, Madagascar

In Namoly farmers build terraces and make extensive use of irrigation. But, only the rice fields receive irrigation. Crops are not planted throughout the entire year. During June through August nothing is grown due to the presence of cold weather and frost which kills anything that is attempted to be grown. The cold, not the water is the limiting factor in Namoly. Farmers start to plant the rice and their upland crops once the cold season has finished. In Namoly, contrary to what would be expected on a tropical island, the most important fact is the cold. This surprises

me every time I bundle up to go to sleep at night.

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by Julie Bednarski, Tamboro, Ft. Dauphon, Madagascar

Southeastern Madagascar tends to have two seasons of rain. The scheduled rainy season is in the beginning of the year, around January through March. All rice terraces are used during this time. The rest of the year is a moderate season of rain, allowing only the bottom terraces to be utilized.

Although there is rain throughout the year, an irrigation system is being repaired to improve rice harvest. CAF, a World Wildlife Fund project that is working with the villagers to manage the forest is in the process of reconstructing a canal that was originally built in 1960. The canal begins in the lower forest boundaries and is divided into four sections, providing the main four families of my village with a regular water supply. One belief of this project is if more rice is produced, the village income level will increase and less rainforest will be destroyed for cash crops such as bananas and coffee. They also plant cassava to supplement their food supply enabling the family to sell rice in order to buy cows. Cows are culturally significant. Even manure from cows is considered clean, so when the cows excrete in the streams, it is not considered polluting the stream.

Madagascar Environment/Agriculture Stories

A Note to the Teacher:
Areas of text that provide specific information about the Madagascar's environment pertaining to water and its relationship with Madagascar's environment and agriculture have been highlighted. Areas of text that provide insight and information into how natural resources might be both used and preserved are also highlighted.

The Environment and Agriculture

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by Clare Sandy
Andranomena, Madagascar

MG Links

TIP: Review the descriptions below each URL in the categories below to determine if it will be a good source for your research question. If you want to check out the URL, copy and paste it directly into the location box of your Internet browser.

Maps

World Wildlife Fund
http://www.panda.org/resources/inthefield/lop/graphics/maps/lot4/mg0048_1.gif
World Wildlife Fund's map of Africa with a zoom of Madagascar.

NASA
http://www.ksc.nasa.gov/mirrors/images/images/pao/STS33/10063680.htm
This high oblique view shows the majority of the island of Madagascar.

Deforestation

Public Broadcasting Station: The Living Edens: Madagascar, A World Apart
http://www.pbs.org/edens/madagascar/paradise.htm
It is important to research the history of slash/burn agriculture. This article fills you in and has some relevant pictures.

OUTDOOR.SE Internet Magazine
http://www.outdoor.se/artiklar/madag/page3.htm
Take a bike tour and learn more about Madagascar, deforestation, and erosion along the way.

Conservation International
http://www.conservation.org/WEB/FIELDACT/regions/afrireg/madagasc.htm
Read about Madagascar Hotspots. Click on the links to Zahamena the Ankarafantsika to find out critical issues facing the regions of Madagascar and what needs to be done to help.

NOAA
http://www.ngdc.noaa.gov/dmsp/fires/madagascar.html
Arial view of Madagascar showing areas of Madagascar fires.

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MG Links

Erosion: Effects On Soil And Water

The American Museum of Natural History
http://www.amnh.org/Exhibition/Expedition/Endangered/madagasc/madagasc.html
Pictures of streams before and after deforestation. You can use this picture to talk about erosion.

Solar Views by Calvin J. Hamilton
http://www.solarviews.com/cap/earth/sediment.htm
A NASA solar view Betsiboka River soil erosion with explanation. An example of Madagascar's "bleeding rivers."

OUTDOOR.SE Internet Magazine
http://www.outdoor.se/artiklar/madag/page3.htm
Take a bike tour and learn more about Madagascar, deforestation, and erosion along the way.

Lemurs

Public Broadcasting Station
http://www.pbs.org/edens/madagascar/links.htm
Many great Madagascar and lemur links. You might find some pictures here.

WWF: Species Under Threat
http://www.panda.org/resources/publications/species/underthreat/ruffledlemur.htm
A fact sheet on lemurs (no pictures).

Solutions

Peace Corps
http://www.peacecorps.gov/wws/water/africa
Look to the Peace Corps site for pictures of people planting rice.
There are at least three pictures with ideas for supplementing the income of the Malagasy people. Use these as part of your solutions.
Find examples of irrigation canals and rice patties on the Peace Corps site.

Public Broadcasting Station: The Living Edens: Madagascar, A World Apart
http://www.pbs.org/edens/madagascar/paradise.htm
This article offers some hope by encouraging a conservation approach through eco-tourism. What is eco-tourism and how might it help the Malagasy people and lemurs?

The International Fund for Agricultural Development
http://www.ifad.org/press/96-39.htm
Read carefully—compare your "solutions" to those announced in this press release. Are you on the right track?

MG Links

Conservation International
http://www.conservation.org/WEB/FIELDACT/regions/afrireg/madagasc.htm
Read about Madagascar Hotspots. Click on the links to Zahamena the Ankarafantsika to find out critical issues facing the regions of Madagascar and what needs to be done to help.

World Wildlife Fund
http://panda.org/news/press/news.cfm?id=1700
Madagascar establishes a spectacular park.

Rice Web
http://www.riceweb.org/geography.htm
Here you can find overviews of rice production and use in various geographic regions and country-by-country detailed descriptions of rice production and constraints, as well as important data about the countries themselves.

Internet Citation Examples

Bedford/St. Martins Citation Styles
http://www.bedfordstmartins.com/online/citex.html
An on-line resource for citing on-line references.

MADAGSCAR PHOTO-ESSAY GUIDELINES

Content Background

Now that you have studied the Peace Corps stories on Madagascar's Environment and Agriculture, you have probably come to the conclusion that deforestation is impacting the lives of Madagascar's people, natural resources, and lemurs. Deforestation directly takes away the lemur's habitat. Indirectly, deforestation alters the rivers and streams which people depend upon for water. Streams that used to run freely are drying up or filling with sediment as the habitat is altered. Rivers are overflowing with red silt from eroding treeless hillsides during the wet season.

The only way to save the Lemur's habitat is to drastically reduce the slash/burn method of clearing rainforests for cattle and crops. But how can you ask people to stop doing the very thing that provides them with food? Do any of the Peace Corps stories suggest ways that you could expand upon to create a permanent food source and income for the Malagasy people? How can you change the present situation in Madagascar by helping people use *and* preserve their natural resources (forests and water) in a way that benefits them and ultimately helps preserve the lemur's habitat?

The Photo-Essay Project

To show that you have an understanding of the complexity of this issue, your research team will create a photo-essay using PowerPoint, HyperStudio, or other electronic presentation software. This essay will be like a slide show of images and information that you have collected and organized from the Peace Corps web site and MG Links.

MADAGSCAR PHOTO-ESSAY GUIDELINES

Questions To Answer

The following guiding questions are categorized under the bigger, essential questions that you explored in class in relation to your own world. The guided questions are more specific to your photo-essay. Use the Essential Questions as lead-ins or transition pages in your presentation. Use the guiding questions to help you focus in on Madagascar's situation.

Essential Question #1: How do people affect and change the environment?

Guiding Questions to Explore:

- Why is Madagascar becoming deforested?
- What are the effects of this deforestation on rivers and streams?
- How is the deforestation impacting people?
- What do lemurs look like and why are they endangered?

Essential Question #2: How can we balance our need to use natural resources while also preserving these resources?

Guiding Questions to Explore:

- What ideas do you have for substituting deforestation for permanent crops? (The Peace Corps site has pictures of at least three options).
- How can these solutions help both people and lemurs of Madagascar?
- What are some of the difficulties and complexities of carrying out these proposed solutions?

Essential Question #3: Why is it important for us to know how we impact our resources and environment?

Guiding Question to Explore:

- Why is it important for both us and the people of Madagascar to know how its resources are being impacted?

MADAGSCAR PHOTO-ESSAY GUIDELINES

Language Requirements

Divide the above questions among your research team according to expertise or interest. It is helpful to have two people work on two related questions so that you may share and discuss your findings. When you find images and information that do a great job of addressing the questions you are researching, you should then save the images and develop first person explanations to accompany them. Restating your findings in first person adds voice to your presentation and draws the audience in. Many of the Peace Corps pictures and explanations will help you out here. For example, you can use ideas from the stories on Environment and Agriculture to create first person accounts in which you describe your team's findings on deforestation in relation to lemurs, water, and soil.

Be sure to reference each presentation page with the author/photographer, organization, and URL of the site. Even though you are incorporating these images and parts of the PCV observations as your own from your Madagascar virtual visit, you must give credit to those who gathered the information you find useful. See the Reference Guidelines web sites at the bottom of MG Links on how to reference web sites.

Technical Requirements

Once you have recorded the question you are answering, the reference, and a caption, you should e-mail it (attaching the images) to the person or people in charge of formatting the information into electronic presentation software.

Keep the following tips in mind as you format your presentation:

- Pictures should be kept proportional.
- No more than two pictures per page.
- Text should be proofread, edited, and written in first person.
- Font size and color should be easy to see and read in relation to background.
- Text and pictures should flow from one page to the next.
- Information should be presented in a logical order.
- A title page with research team names should appear at the beginning.
- A reference page should appear at the end with a bibliography or sources used for each page of the presentation.

Be sure to reference your rubric frequently as you work on your presentation!

Evaluation of Madagascar Photo Essay

Team Members:_____

_____

Reviewer:_____

Please use the following rating scale when reviewing the photo essay:

5	4	3	2	1
Masterful	**Skilled**	**Able**	**Apprentice**	**Novice**

Area	Points		Descriptors
	Teacher	Student	
Content Accuracy			• Photo essay addresses the question of how people affect and change the environment. • The content is accurate and relevant to the essential questions.
Content Depth			• The photo essay addresses the questions about balancing the need to use natural resources while also preserving these resources. • The photo essay discusses the importance of knowing how we impact our resources and environment. • The content shows an extension of previous learning from the unit.
Process			• Team members actively collaborate, participate, and make good use of class time to meet delegated responsibilities. • Team members effectively use technology to locate and collect information.
Presentation and Neatness			• Team members effectively use the presentation to communicate information to a wide audience. • The presentation is organized and has smooth transitions. • Text is edited and easy to read.
Creativity			• Images and text are creatively and clearly presented.
Total			

Comments: